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IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE APPLICATION OF	:
STEPHAN HUEFFER, ET AL.	: EXAMINER: A.S. KHAN
SERIAL NO: 10/531,178	:
FILED: APRIL 11, 2005	: GROUP ART UNIT: 1796
FOR: PRODUCTION OF A SEMIFINISHED LEATHER PRODUCT	:

APPEAL BRIEF

This is an appeal to the Board of Patent Appeals and Interferences under 35 U.S.C. §134 taken from the August 19, 2009, Final Rejection of Application Serial No. 10/531,178, filed April 11, 2005. A Notice of Appeal was timely filed on October 21, 2009.

STATEMENT OF REAL PARTY IN INTEREST

The real party in interest in this appeal is BASF Aktiengesellschaft, having an address of Ludwigshafen, Germany, by virtue of an assignment recorded on April 27, 2005, at reel 016501 and frame 0413.

STATEMENT OF RELATED APPEALS AND INTERFERENCES

Appellants/Applicants, Appellants/Applicants' legal representative, and assignee, are aware of no appeals, interferences, judicial proceedings, or cases that are related to, directly affect or would be directly affected by, or have a bearing on the decision of the Board of Patent Appeals and Interferences in this appeal.

STATEMENT OF JURISDICTION

The Board of Patent Appeals and Interferences (hereafter Board) has jurisdiction under 35 U.S.C. §134. This is an appeal to the Board from the Final Rejection dated August 19, 2009. A Notice of Appeal was timely filed on October 21, 2009.

STATUS OF CLAIMS

Claims 1-3 and 5-21 are pending in this application.

Claim 4 was previously canceled during prosecution.

No claims are allowed.

No claims are withdrawn.

No claims are objected to.

Claims 1-3 and 5-21 are finally rejected.

Claims 1-3 and 5-21 are herein appealed.

STATUS OF AMENDMENTS

The claims were not amended after the Final Rejection of August 19, 2009.

SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent Claim 1 is drawn to a process for the production of a semifinished leather product from an animal hide, the process comprising: pretanning an animal hide with a chromium-free tanning agent to produce a pretanned animal hide, wherein pretanning is effected with the additional use of a clay mineral which, after stirring for 30 minutes in water at 50°C at a circumferential rotor speed of from 5 to 25 m/s, has a bimodal size distribution with a first, finely divided fraction whose number average particle diameter is less than 0.5 μm and a second, coarser fraction whose number average particle diameter is less than 5 μm, in each case determined by the method according to ISO 13320-1, by combined laser light diffraction and light scattering, the proportion of the first, finely divided fraction being from 10 to 90% by weight, and the pretanned animal hide is dried to a water content of from 5 to 45%, based on the total weight of the semifinished leather product. (Claims Appendix, Claim 1) (Evidenced by Specification: page 3, lines 5-16).

Claims 2-3 and 5-21 depend, either directly or indirectly, from Claim 1.

There are no claims with means or step plus function language on appeal.

GROUNDS OF REJECTION TO BE REVIEWED

(1) Claims 1-3, 5-7, 9-13 and 16-17 stand finally rejected under 35 U.S.C. §103(a) as being unpatentable over Plapper (Plapper et al., US 4,272,242) in view of Komforth (Komforth et al., US 6,033,590) (Office Action dated August 19, 2009; page 3, ¶ 9).

(2) Claim 14 stands finally rejected under 35 U.S.C. §103(a) as being unpatentable in view of Plapper, Komforth and Cramer (Cramer et al., US 2002/0192366) (Office Action dated August 19, 2009; page 2, ¶ 4).

(3) Claims 8 and 15 stand finally rejected under 35 U.S.C. §103(a) as being unpatentable in view of Plapper, Komforth, and Munjtes (Munjtes et al., US 4,442,687) (Office Action dated August 19, 2009; page 2, ¶ 5).

(4) Claims 18-21 stand finally rejected under 35 U.S.C. §103(a) as being unpatentable in view of Plapper, Komforth, and Tamareselvy (Tamareselvy et al., US 7,378,479) (Office Action dated August 19, 2009; page 6, ¶ 10).

ARGUMENT

(1) The rejection of Claims 1-3, 5-7, 9-13 and 16-17 under 35 U.S.C. §103(a) as being unpatentable over Plapper and Komforth.

A. The Examiner erred in concluding that the claimed inventive embodiments are *prima facie* obvious.

The Examiner, at page 4 of the August 19, 2009, Official Action, acknowledges "Plapper does not teach the bimodal [particle] distribution [or the] dried water content of the hide..." Concerning the bimodal particle distribution, the Examiner, asserts, at page 5 of the Official Action, "it would have been obvious ...to optimize [to a bimodal distribution of

particles]..." and that "Plapper explicitly teaches that the desired particle size can be adjusted by grinding and air sifting..." so "[n]othing unobvious is seen in sifting the particles to arrive at a bimodal distribution." The Examiner further asserts, at page 5 of the Official Action, concerning the water content of the dried hides, "it would have been obvious to one of ordinary skill in the art to optimize this variable [the water content of the dried hides; a water content of from 5 to 45%] to arrive at a pretanned hide with improved tanning agent reception properties resulting in the most effectively tanned leather."

With this as background, specification page 2, lines 1-3, describing the state of the art at the effective filing date of the application, describes in part "wet semifinished [leather] products practically **cannot be dried to a water content below about 40 to 80% by weight since they dry to a horny material with fiber adhesion and resoftening is thus impossible**" (emphasis added). Specification page 2, lines 12-18, further describes in part that "[t]he main problem associated with known semifinished leather products is therefore that the **water content must not fall below a certain level if the quality of the leather to be produced in subsequent steps is not to be adversely effected**" (emphasis added). Specification page 2, lines 20-24, describes "[t]here has therefore been no lack of attempts to provide processes for the production of semifinished leather products, which process...[reduces] the water content to a range in which there is no longer any threat of attack by microorganisms and at the same time the quality of semifinished leather products is not adversely affected..."

Specification page 3, lines 5-16, describes in part "[w]e have found that this object [e.g., the ability to reduce the water content in a seminifished hide such that the quality of the leather to be produced in subsequent steps is not to be adversely effected] is achieved by a process for the production of a semifinished leather product from an animal hide by pretanning with a chromium free tanning agent, wherein **pretanning is effected** with the

additional use of a clay mineral which, after stirring for 30 minutes in water at 50°C at a circumferential rotor speed of from 5 to 25 m/s,...has **a bimodal size distribution with a first, finely divided fraction whose number average particle diameter is less than 0.5 μm and a second, coarser fraction whose number average particle diameter is less than 5 μm**, in each case determined by the method according to ISO 13320-1, by combining laser light diffraction and light scattering, the proportion of the first, finely divided fraction being from 10 to 90% by weight, and wherein the pretanned animal hide is dried to a water content of from 5 to 45%, based on the weight of the semifinished leather product" (emphasis added).

Specification page 5, lines 18-21, characterizes, as "surprising," the result that a semifinished leather with a water content of from 5 to 45%, based on the weight of the semifinished leather product, can be produced by the method of Claim 1 and the claims depending therefrom so that the quality of a leather subsequently produced from the semifinished leather product is unaffected.

Thus, at the effective filing date of the present application, for the state of the art, reducing the water content of a semifinished leather product from 5 to 45%, based on the weight of the semifinished leather product, in such a way that the semifinished leather product could subsequently be used to make a leather whose quality was unaffected by the reduced water content of the semifinished leather product, was a desirable but un-achieved outcome.

In Ex Parte Whalen, the Examiner's obviousness rejection was based on the reasoning that a person of ordinary skill in the art would have been motivated to optimize a specific property of prior art embolizing compositions (viscosity) because he would have had a reasonable expectation of success in achieving the safest clinical outcome and avoiding transvenous passage of the embolizing composition. (See Whalen, Pages 13-14). The Board

rejected this reasoning, and concluded that the Examiner had not made out a *prima facie* case of obviousness.

The Board began by noting that "while discovery of an optimum value of a variable in a normal process is normally obvious, this is not always the case. **One exception to the rule is where the parameter optimized was not recognized in the prior art as one that would affect the results.**" (See Whalen, Page 14)(emphasis added).

Following Whalen, it is clear that the applied art does not render obvious the claimed methods employing the specified bimodal particle size distribution ratios as required ingredients, the result of which is an improved semifinished leather having a reduced water content that can be used to make a leather whose quality is unaffected by the reduced water content of the semifinished leather product. None of the applied art teaches, suggests or recognizes the importance of using the specified bimodal distribution of particles in the specified ratios, or the beneficial effect that such ingredients in such ratios would have on producing improved, reduced water content, semifinished leather products. Applicants made this discovery. In the words of Whalen, because the applied art does not recognize that practicing the claimed methods (that require use of particles in the required bimodial size distribution with the claimed ratios) affects the properties of resulting semifinished leather, the specified particle bimodal size distribution is not a parameter that can be "optimized" under the law.

Furthermore, no apparent reason to supplement the broad, general teachings of the applied art exists to ensure that the claimed methods employ the required particles having the specified biomodal distribution in the specificed ratios (just as no apparent reason to increase viscosity existed in Whalen). For example, and contrary to the Examiner's assertion, *supra*, nothing in Plapper teaches, suggests, or recognizes any benefits associated with actually

employing particles having the bimodal size distribution and ratios as described in the claimed inventive methods. Similarly, Komforth's general disclosure would not lead to methods employing particles having the required bimodal size distribution and ratios.

In short, the applied art would not have led one of ordinary skill in the art to optimize the required ingredients in such a way as to produce methods employing the particles having the required bimodal size distribution and ratios.

Accordingly, and for at least the above reasons, no *prima facie* case of obviousness exists in the present case. The obviousness rejection should be withdrawn.

B. The Examiner erred in concluding that the claimed inventive embodiments are obvious.

Even if a *prima facie* case of obviousness did exist, which it does not, Appellants submit that the claimed invention is not rendered obvious for at least the following reasons.

M.P.E.P. § 2144.05 III describes, "Applicants can rebut a *prima facie* case of obviousness based on overlapping ranges by showing the **criticality of the claimed range**. The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the **applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range** (emphasis added)." See In re Woodruff, 919 F.2d. 1575, (Fed. Cir.1990).

As described, *supra*, the cited references do not describe or suggest particles having the required bimodal size distribution and ratios as employed in the claimed methods, and employing these particles is critical to the claimed inventive methods.

Further, as elaborated, *supra*, the claimed methods, employing particles with the required bimodal size distribution and ratios, surprisingly produce a semifinished leather with a reduced water content that can subsequently be converted into a leather product without negatively affecting the quality of the leather product. This superior and unexpected result is not described or suggested by the cited references, either alone or in combination.

Additionally, specification page 6, lines 15-20, describe, in part, "[a] further advantage [of the claimed methods] is that hide defects or quality-impairing abnormalities of the hide are more readily observable on the dried semifinished products in terms of defect detection and hence the sorting with respect to hide quality can be carried out more easily, more quickly and with improved reproducibility." This superior result of improved defect detection is not described or suggested by the cited references, either alone or in combination, making it a superior and unexpected result.

Thus, the cited references do not describe or suggest at least 1) the semifinished leather water content feature, 2) the particle bimodal size distribution feature, and 3) the ratios feature, of the claimed inventive methods. Further, the cited references do not describe or suggest at least the superior and unexpected results that a) the claimed methods produce a semifinished leather with a reduced water content that can subsequently be converted into a leather product without negatively affecting the quality of the leather product, and b) that hide defects or quality-impairing abnormalities of the hide are more readily observable on the dried semifinished leather products produced by the claimed inventive methods.

For all of these reasons, Appellants submit that the Examiner has erred in concluding that the claimed invention is obvious.

(2) The rejection of Claim 14 under 35 U.S.C. §103(a) as being unpatentable over Plapper, Komforth, and Cramer.

Claim 14 depends indirectly from Claim 1. Accordingly, the following arguments, already presented with respect to Claim 1, are herein incorporated by reference.

A. The Examiner erred in concluding that Claim 14 is *prima facie* obvious.

As explained in detail *supra*, under Whalen, Plapper and Komforth would not have led one of ordinary skill in the art to optimize the required ingredients in such a way as to produce the claimed method employing particles having the required bimodal size distribution and ratios. Cramer, whom the Examiner relies upon to provide "hectorites" (see page 5 of the Official Action of February 24, 2009, referenced at page 2, paragraph 4 of the present Official Action), does not remedy at least this defect of Plapper and Komforth. Accordingly, no *prima facie* case of obviousness exists in the present case. The obviousness rejection should be withdrawn

B. The Examiner erred in concluding that Claim 14 is obvious.

Even if a *prima facie* case of obviousness did exist with respect to Claim 14, which it does not, Appellants submit that Claim 14 is not rendered obvious for at least the following reasons.

As described *supra*, Plapper and Komforth do not describe or suggest at least 1) the semifinished leather water content feature, 2) the particle bimodal size distribution feature, and 3) the ratios feature, of the claimed inventive method. Further, the cited references do

not describe of suggest at least the superior and unexpected results that a) the claimed method produces a semifinished leather with a reduced water content that can subsequently be converted into a leather product without negatively affecting the quality of the leather product, and b) that hide defects or quality-impairing abnormalities of the hide are more readily observable on the dried semifinished leather products produced by the claimed inventive method. Cramer, whom the Examiner relies upon to provide "hectorites" (see page 5 of the Official Action of February 24, 2009, referenced at page 2, paragraph 4 of the present Official Action), does not remedy at least these defects of Plapper and Komforth.

For all of these reasons, Appellants submit that the Examiner has erred in concluding that the claimed invention is obvious.

(3) The rejection of Claims 8 and 15 under 35 U.S.C. §103(a) as being unpatentable over Plapper, Komforth, and Munjtes.

Claims 8 and 15 depend, either directly, or indirectly, from Claim 1. Accordingly, the following arguments, already presented with respect to Claim 1, are herein incorporated by reference.

A. The Examiner erred in concluding that Claims 8 and 15 are *prima facie* obvious.

As explained in detail *supra*, under Whalen, Plapper and Komforth would not have led one of ordinary skill in the art to optimize the required ingredients in such a way as to produce the claimed method employing particles having the required bimodal size distribution. Munjtes, whom the Examiner relies upon to provide "tentering drying" (see page 6 of the Official Action of February 24, 2009, referenced at page 2, paragraph 5 of the

present Official Action), does not remedy at least this defect of Plapper and Komforth. Accordingly, no *prima facie* case of obviousness exists in the present case. The obviousness rejection should be withdrawn.

B. The Examiner erred in concluding that Claims 8 and 15 are obvious.

Even if a *prima facie* case of obviousness did exist with respect to Claims 8 and 15, which it does not, Appellants submit Claims 8 and 15 are not rendered obvious for at least the following reasons.

As described *supra*, Plapper and Komforth do not describe or suggest at least 1) the semifinished leather water content feature, 2) the particle bimodal size distribution feature, and 3) the ratios feature, of the claimed inventive methods. Further, the cited references do not describe of suggest at least the superior and unexpected results that a) the claimed methods produce a semifinished leather with a reduced water content that can subsequently be converted into a leather product without negatively affecting the quality of the leather product, and b) that hide defects or quality-impairing abnormalities of the hide are more readily observable on the dried semifinished leather products produced by the claimed inventive methods. Munjtes, whom the Examiner relies upon to provide "tentering drying" (see page 6 of the Official Action of February 24, 2009, referenced at page 2, paragraph 5 of the present Official Action), does not remedy at least these defects of Plapper and Komforth.

For all of these reasons, Appellants submit that the Examiner has erred in concluding that the claimed invention is obvious.

(4) The rejection of Claims 18-21 under 35 U.S.C. §103(a) as being unpatentable over Plapper, Komforth, and Tamareselvy.

Claims 18-21 depend, indirectly, from Claim 1. Accordingly, the following arguments, already presented with respect to Claim 1, are herein incorporated by reference.

A. The Examiner erred in concluding that Claims 18-21 are *prima facie* obvious.

As explained in detail *supra*, under Whalen, Plapper and Komforth would not have led one of ordinary skill in the art to optimize the required ingredients in such a way as to produce the claimed inventive methods employing particles having the required bimodal size distribution and ratios. Tamareselvy, whom the Examiner relies upon to provide "spray application of compositions comprising cationic polymers and amphoteric polymers for softening leather" (see page 7 of the present Official Action), does not remedy at least this defect of Plapper and Komforth. Accordingly, no *prima facie* case of obviousness exists in the present case. The obviousness rejection should be withdrawn

B. The Examiner erred in concluding that Claims 18-21 are obvious.

Even if a *prima facie* case of obviousness did exist with respect to Claims 18-21, which it does not, Appellants submit Claims 18-21 are not rendered obvious for at least the following reasons.

As described *supra*, Plapper and Komforth do not describe or suggest at least 1) the semifinished leather water content feature, 2) the particle bimodal size distribution feature, and 3) the ratios feature of the claimed inventive methods. Further, the cited references do not describe of suggest at least the superior and unexpected results that a) the claimed methods produce a semifinished leather with a reduced water content that can subsequently be converted into a leather product without negatively affecting the quality of the leather product, and b) that hide defects or quality-impairing abnormalities of the hide are more

readily observable on the dried semifinished leather products produced by the claimed inventive methods. Tamareselvy, whom the Examiner relies upon to provide "spray application of compositions comprising cationic polymers and amphoteric polymers for softening leather" (see page 7 of the present Official Action), does not remedy at least these defects of Plapper and Komforth.

For all of these reasons, Appellants submit that the Examiner has erred in concluding that the claimed invention is obvious.

CONCLUSION

For the reasons stated herein:

(1) The Final Rejection of Claims 1-3, 5-7, 9-13 and 16-17 as being unpatentable over Plapper and Komforth under 35 U.S.C. §103(a) should be reversed;

(2) The Final Rejection of Claim 14 as being unpatentable over Plapper, Komforth, and Cramer under 35 U.S.C. §103(a) should be reversed;

(3) The Final Rejection of Claims 8 and 15 as being unpatentable over Plapper, Komforth, and Munjtes under 35 U.S.C. §103(a) should be reversed; and

(4) The Final Rejection of Claims 18-21 as being unpatentable over Plapper, Komforth, and Tamareselvy under 35 U.S.C. §103(a) should be reversed.

Respectfully submitted,

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CLAIMS APPENDIX

Claim 1. A process for the production of a semifinished leather product from an animal hide, the process comprising:

pretanning an animal hide with a chromium-free tanning agent to produce a pretanned animal hide,

wherein

pretanning is effected with the additional use of a clay mineral which, after stirring for 30 minutes in water at 50°C at a circumferential rotor speed of from 5 to 25 m/s, has a bimodal size distribution with a first, finely divided fraction whose number average particle diameter is less than 0.5 μm and a second, coarser fraction whose number average particle diameter is less than 5 μm, in each case determined by the method according to ISO 13320-1, by combined laser light diffraction and light scattering, the proportion of the first, finely divided fraction being from 10 to 90% by weight, and

the pretanned animal hide is dried to a water content of from 5 to 45%, based on the total weight of the semifinished leather product.

Claim 2. The process as claimed in claim 1, wherein the chromium-free tanning agent for the pretanning is selected from the group consisting of an aldehyde tanning agent, an isocyanate, an aluminum salt, an oxazolidine and tetrakishydroxymethylphosphonium chloride.

Claim 3. The process as claimed in claim 1, wherein the pretanned animal hide is dried to a water content of from 15 to 35%, based on the total weight of the semifinished leather product.

Claim 4. (Canceled).

Claim 5. The process as claimed in claim 1, wherein substances which, owing to their chemical structure, form strong hydrogen bonds with the clay mineral, are added to the clay mineral before or during the use thereof in the pretanning.

Claim 6. The process as claimed in claim 1, wherein the clay mineral is a phyllosilicate.

Claim 7. The process as claimed in claim 6, wherein the phyllosilicate is selected from the group consisting of a kaolinite, a muscovite, a montmorillonite, a smectite, a saponite, a vermiculite, a hallosite, a bentonite and organically modified variants these phyllocilicates.

Claim 8. The process as claimed in claim 1, wherein the drying is carried out under conditions selected from the group consisting of at ambient temperature and ambient pressure, under reduced pressure, at elevated temperatures, and at reduced pressure at elevated temperatures.

Claim 9. The process as claimed in claim 1, further comprising: moistening the semifinished leather product with an aqueous solution of a tanning assistant which is absorbed into the semifinished leather product by means of a physical force.

Claim 10. The process as claimed in claim 1, further comprising: resoftening the dried semifinished leather product by treatment with water or with an aqueous solution or

suspension of a tanning assistant, to a water content of from 50 to 80%, based on the total weight of the semifinished leather product.

Claim 11. The process as claimed in claim 2, wherein the chromium-free tanning agent, which is an aldehyde tanning agent, is glutaraldehyde.

Claim 12. The process as claimed in claim 5, wherein the substances are selected from the group consisting of urea, an alcohol, a polyol, a propylene carbonate, an organic amide, a urethane and a saccharide.

Claim 13. The process as claimed in claim 12, comprising the saccharide, wherein the saccharide is selected from the group consisting of nitrocellulose, sulfide cellulose and ethylcellulose.

Claim 14. The process as claimed in claim 7, wherein the bentonite is a hectorite.

Claim 15. The process as claimed in claim 9, wherein the drying is carried out on a tenter frame.

Claim 16. The process as claimed in claim 9, wherein the physical force comprises osmosis.

Claim 17. The process as claimed in claim 9, wherein the semifinished leather product is moistened with an aqueous solution of a protein hydrolysis product.

Claim 18. The process as claimed in claim 10, wherein the tanning assistant is an amphoteric or cationic polymer.

Claim 19. The process as claimed in claim 10, wherein the resoftening comprises spraying the dried semifinished leather product with the treatment.

Claim 20. The process of claim 18, wherein the tanning assistant is a cationic polymer.

Claim 21. The process of claim 18, wherein the tanning assistant is an amphoteric polymer.

EVIDENCE APPENDIX

Affidavits and Declarations

No Affidavit or Declaration is relied upon in support of the patentability of the claims in this Appeal.

RELATED PROCEEDINGS APPENDIX

None.